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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,417	09/30/2003	Chung-wook Roh	Q76933	2709

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EXAMINER

EISEN, ALEXANDER

ART UNIT PAPER NUMBER

2629

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,417

Applicant(s)

ROH ET AL.

Examiner

Alexander Eisen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 15, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 2-14 and 16-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 22 is objected to because of the following informalities: claim recites in line 9 “**difference inductors**”. It is believed that this should read - - **different inductors** - -, as outlined in the paragraph [30] of the disclosure. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 22-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 22 recites: “dividing a charging mode into a first charging mode and a second charging mode, and a first discharging mode and a second discharging mode”, which is contradictory, because it seemingly divides **a charging mode** into “a first **discharging** mode and a second **discharging** mode”. Apparently the above limitation was meant to read - - dividing a charging mode into a first charging mode and a second charging mode, and dividing a **discharging mode into** a first discharging mode and a second discharging mode.
6. The appropriate correction would overcome this rejection.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Marcotte, US 5,642,018.

With respect to claims 1 and 15 Marcotte discloses a sustain-discharge driving device and associated with it driving method comprising a sustain-discharge switching unit (switches S1-S4 and control network 20 in FIG. 5), which connects charging and discharging paths of an energy recovery unit (storage capacitor C_{ss} and coil L) to the PDP, according to a sustain-discharge sequence (FIG. 6); and the energy recovery unit, which, according to an energy recovery sequence, discharges energy of the PDP to an energy accumulation device C_{ss} through a resonance path while in discharging mode (state S3), charges the PDP with the energy accumulated in the energy accumulation device through a resonance path while in charging mode (state S1), and forms a closed circuit in which a voltage difference between both ends of an inductor (V_c – see diagram for V_c in FIG. 6) is greater than a predetermined value, so as to eliminate a free-wheeling current (diagram for I_L in states 2 and 4 in FIG.6), which is generated in the inductor of the resonance path due to a parasitic effect, during mode transition (col. 5, line 18 – col. 6, line 12).

Allowable Subject Matter

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9. Claims 2-14 and 16-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: none of the references, either singularly or in combination, teach or fairly suggest the features of the power recovery circuit for a plasma display device based on inductors and capacitors, wherein the charging mode is divided into a first charging mode and a second charging mode, the discharging mode is divided into a first discharging mode and a second discharging mode, and different resonance paths are formed in the first charging mode and the second charging mode, and in the first discharging mode and the second discharging mode, or wherein the energy recovery unit includes four inductors which form resonance paths, caused by different inductors, in the first charging mode and the second charging mode, and in the first discharging mode and the second discharging mode; or wherein the sustain-discharge switching unit which includes first, second, third, and fourth switches (S.sub.d1, S.sub.d2, S.sub.u2, S.sub.u1) connected in series, connects one end of the first switch to a ground line and one end of the fourth switch to a supply voltage, connects a contact point of the second switch and the third switch to the PDP, and connects a contact point of the first switch and the second switch and a contact point of the third switch and the fourth switch to different ends of the energy recovery unit.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rilly et al., US 5,808,420.

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McCormack, US 6,897,834.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Eisen whose telephone number is (571) 272-7687. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexander Eisen
Primary Examiner
Art Unit 2629

22 June 2006